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ABSTRACT

A teacher training program located in the Department of Communication at the University of Montana systematically attempts to modify teachers' communication behavior within the classroom. In step 1, baseline behavioral data are collected from each teacher by videotaping within the classroom. Step 2 involves coding the videotapes, using a "simple" coding scheme based upon communication style and immediacy research. In step 3, baseline effectiveness scores are collected, using specific procedures and measurements. During step 4, individual conferences are scheduled with each teacher. The trainer brings the teacher's videotapes, the coded behavior inventory, teacher effectiveness data, and a videotape of a highly effective teacher. Step 5 occurs during the second term, when the teacher is videotaped again, effectiveness scores recorded, and tapes coded. Step 6 occurs during the first week of the third term, when the trainer meets with the teacher again and compares the most recent data with that from the first meeting. Step 7 involves the repeating of all procedures each term. This program's effectiveness is discussed as are its limitations and modifications since its author has relocated at the University of Oklahoma. Six tables are included. (JMK)

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THE MONTANA PROGRAM TO SYSTEMATICALLY MODIFY TEACHER COMMUNICATIVE BEHAVIOR

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The Montana Program to Systematically Modify
Teacher Communicative Behavior

PRECIS

This paper outlines a successful teacher training program which has been utilized at the University of Montana to modify teacher classroom behavior. The program is based upon six years of basic research invetigating the relationship between teacher communicative style, teacher-student immediacy and teacher effectiveness. The training program's strength is its simplicity while directly improving teacher effectiveness.

The Montana Program to Systematically Modify
Teacher Communicative Behavior

Improving the educational system of the United States has recently become a top priority of our highest political figures. A key to improving the overall educational system rests within the quality of teaching which transpires within American classrooms. The major assumption which underlies this paper and the Montana program is that effective education is directly linked to effective teaching. As one improves classroom teaching an improvement in education will be realized.

Instructional researchers have isolated a series of teacher behaviors which relate positively to effective teaching (e.g., Rosenshine, 1970; Brophy, 1979; Andersen and Andersen, 1982; Nussbaum, 1982). These investigations have provided the much needed evidence to education scholars who believe that good teaching is not only related to positive outcomes but is also a modifiable skill. Stated simply, effective teachers perform specific classroom behaviors which ineffective teachers, with proper training, can also perform. The purpose of this paper is to explicate the successful teacher training program utilized within the Department of Communication at the University of Montana.

Instructional communication researchers have investigated effective teaching for nearly a decade. Two major institutions (Purdue University and West Virginia University) have been dedicated to uncovering the communication behaviors of teachers which are positively linked to effective teaching. This research has centered upon two constructs: Communication Style and Immediacy.

Communication Style. A recent text has outlined the theoretical as well as practical domain of the communication style construct (See Norton, 1983). As early as 1977, Norton investigated those style behaviors which effective teachers utilized (Norton, 1977). Building upon this foundation, Nussbaum and Scott (1979; 1980); Norton and Nussbaum (1980); Nussbaum (1982); and Norton and Holladay (1983) linked an instructor's dramatic behaviors to effective teaching.

Immediacy. Mehrabian (1971) defined an individual's immediacy behaviors as communicating psychological and physical closeness. Andersen (1979) and Andersen and Andersen (1982) have explored the immediacy behaviors of teachers within the classroom. Results from this research suggests that teachers who are perceived as immediate by their students are typically rated more effective than teachers who are perceived as non-immediate.

The program to modify teacher communication behavior within the classroom is based upon the results of the communication

style research and the immediacy research. The major purpose of the program is to train teachers in those dramatic style behaviors and immediacy behaviors which have been linked to effective teaching.

The Program

The teacher training program systematically attempts to modify teacher behavior utilizing the following procedures:

STEP 1: Baseline behavioral data is collected from each teacher by videotaping within the classroom. Each teacher is videotaped within their own classroom teaching their own materioal. Because of technical limitations, each teacher at Montana was only videotaped once, usually in the middle week of the quarter. Modifications have recently been made so that each teacher is currently videotaped three (3) times during the semester. The camera is located so as to capture the entire body of the teacher and is able to follow the teacher throughout the room.

STEP 2: The videotapes are coded utilizing a "simple" coding scheme based upon style and immediacy research (See Nussbaum, 1982). Since the tapes must be coded within a relatively short period of time, a coding procedure had to be constructed. The actual behaviors which were coded can be found in Table 1. Graduate students majoring in communication who had enrolled or

had completed a graduate seminar in Nonverbal Communication served as coders. A one-hour training session was held to insturct the coders and increase reliability.

STEP 3: Baseline effectiveness scores are collected utilizing the procedures and measurements outlined by Norton and Nussbaum (1980). The standardized teacher effectiveness measures were completed by students during the last week of class. In addition, test scores for each student on standardized examinations were gathered.

STEP 4: During the first week of the second term, individual conferences are scheduled with each teacher. The trainer (principal investigator) brings into the conference: a) the teacher's videotape; b) the coded behavior inventory; c) the teacher effectiveness data; and d) a videotape of a highly effective teacher (this videotape was completed at Purdue University and shows the most effective instructor within the Communication Department lecturing to his basic skills class). The trainer shows the teacher his/her videotape and the coded behaviors are discussed. Next, the trainer shows the teacher the highly effective teacher. The trainer, during this process, makes suggestions concerning specific modifications of behavior when warranted. For example, teacher #1 (See Table 2) was told to move away from behind the desk (become more immediate) and move around the class (become more dramatic).

STEP 5: During the second term, the videotaping is repeated and effectiveness scores are recorded. The tapes are coded.

STEP 6: During the first week of the third term, the teacher trainer meets with the teacher and comparisons are made with the data from the first conference.

STEP 7: All procedures are repeated each term.

Strengths of the Program

The Montana Program does modify the communicative behavior of teachers. Tables 2 through 6 document the behavioral change of five (5) teachers who have participated in the program. In addition, Nussbaum (1983) has linked these behavioral changes to increased effectiveness scores and to higher average test results. The program appears to be successful for the following reasons:

1. The program is based upon instructional research with superior operationalizations of teacher behavior (style and immediacy) and teacher effectiveness.
2. The program utilizes videotapes of in-class behavior. The teachers can view themselves as they teach. The viewing of one's own behavior has a powerful effect.
3. The program stresses simplistic change. The teachers are not asked to modify a complex series of behaviors. Often, teachers are asked simply to move within the classroom.

4. The program stresses longitudinal intervention. One-shot inservice training is rejected. The program is an on-going part of teacher preparation.
5. The program utilizes each teacher as his/her own control and comparison point.

Limitations of the Program

The Montana Program has several serious limitations:

1. The program has been structured for graduate student teachers within a Department of Communication. Although the program may be generalizable throughout a university, it may have limited utility within high schools, secondary schools and elementary schools.
2. The program is expensive. The videotaping procedures involves costly equipment. If a school does not already possess the taping equipment, the initial costs can be quite expensive.
3. The program takes time. A trainer must meet with each teacher and review a 50 minute videotape. In addition, the coding process is very time consuming.

Modifications of the Program

Since the principal author of the Montana Program has moved to the University of Oklahoma, several modifications have been worked into the program.

1. The number of videotaping sessions within the classroom has been increased for each teacher. Currently each teacher is videotaped during the 2nd, 6th, and 10th week of the term. It is felt that videotaping more often will provide a more valid indication of actual in-class performance.
2. Teachers from disciplines other than communication teaching courses other than the basic course have been included within the program. Currently an economics professor is being videotaped.
3. The coding scheme is in the process of a major modification. An expert within the field of Nonverbal Communication (Professor Mark Comadena) is expanding the Nonverbal behaviors to be coded. In addition, a verbal coding scheme which includes narratives, self-disclosures, and humor will be incorporated into the coding procedures.

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TABLE 1

INTER-CODER RELIABILITIES

Behaviors	Spearman Correlation
Teacher Movement	
1. Time spent away from desk	.91
2. Total number of movement at least one step from present position	.88
3. Total number of hand-arm gestures	.90
4. Total count of hand-arm gestures	.93
5. Double Takes	.84
6. Accenting behaviors	.85
7. Time looking directly at class	.96
8. Count of times looking at students	.93

TABLE 2

CLASSROOM BEHAVIOR SCORES FOR TEACHER #1

20 MINUTE VIDEO TAPE

Behaviors	Fall '81	Winter '82	Spring '82
Teacher Movement			
1. Time spent away from desk	00 min.: 25 sec.	17 min.: 50 sec.	19 min.: 00 sec.
2. Total number of movement at least one step from present position	2 moves	27 moves	78 moves
3. Total number of hand gestures	104 hand gestures	143 hand gestures	268 hand gestures
4. Total count of hand-arm gestures	8 hand-arm gestures	18 hand-arm gestures	50 hand-arm gestures
5. Double Takes	2	2	2
6. Accenting behaviors	5	47	32
7. Time looking directly at class	15 min.: 35 sec.	18 min.: 57 sec.	18 min.: 00 sec.
8. Count of times looking at students	63	67	55

TABLE 3

CLASSROOM BEHAVIOR SCORES FOR TEACHER #2

20 MINUTE VIDEO TAPE

Behaviors	Fall '81	Winter ' 82	Spring '82
Teacher Movement			
1. Time spent away from desk	00 min.: 00 sec.	17 min.: 16 sec.	17 min.: 00 sec.
2. Total number of movement at least one step from present position	0 moves	92 moves	93 moves
3. Total number of hand gestures	180 hand gestures	101 hand gestures	152 hand gestures
4. Total count of hand-arm gestures	12 arm-hand gestures	31 arm-hand gestures	35 arm-hand gestures
5. Double Takes	0	4	4
6. Accenting behaviors	6	13	13
7. Time looking directly at class	16 min.: 25 sec.	16 min.: 42 sec.	16 min.: 55 sec.
8. Count of times looking at students	35	42	68

TABLE 4

CLASSROOM BEHAVIOR SCORES FOR TEACHER #3

20 MINUTE VIDEO TAPE

Behaviors	Fall '81	Winter '82	Spring '82
Teacher Movement			
1. Time spent away from desk	00 min.: 00 sec.	16 min.: 26 sec.	19 min.: 51 sec.
2. Total number of movement at least one step from present position	0 moves	57 moves	66 moves
3. Total number of hand gestures	59 hand gestures	69 hand gestures	130 hand gestures
4. Total count of hand-arm gestures	55 arm-hand gestures	30 arm-hand gestures	61 arm-hand gestures
5. Double Takes	8	8	19
6. Accenting behaviors	36	34	25
7. Time looking directly at class	18 min.: 07 sec.	18 min.: 00 sec.	18 min.: 35 sec.
8. Count of times looking at students	41	51	52

TABLE 5

CLASSROOM BEHAVIOR SCORES FOR TEACHER #4

20 MINUTE VIDEO TAPE

Behaviors	Winter '82	Spring '82
Teacher Movement		
1. Time spent away from desk	7 min.: 33 sec.	20 min.: 00 sec.
2. Total number of movement at least one step from present position	29 moves	46 moves
3. Total number of hand gestures	102 hand gestures	72 hand gestures
4. Total count of hand-arm gestures	15 arm-hand gestures	30 arm-hand gestures
5. Double Takes	2	8
6. Accenting behaviors	5	6
7. Time looking directly at class	15 min.: 17 sec.	16 min.: 16 sec.
8. Count of times looking at students	38	46

TABLE 6

CLASSROOM BEHAVIOR SCORES FOR TEACHER #5

20 MINUTE VIDEO TAPE

Behaviors	Winter '82	Spring '82
Teacher Movement		
1. Time spent away from des.	4 min.: 40 sec.	18 min.: 25 sec.
2. Total number of movement at least one step from present position	74 moves	108 moves
3. Total number of hand gestures	244 hand gestures	266 hand gestures
4. Total count of hand-arm gestures	52 arm-hand gestures	76 arm-hand gestures
5. Double Takes	4	26
6. Accenting behaviors	36	39
7. Time looking directly at class	14 min.: 36 sec.	16 min.: 45 sec.
8. Count of times looking at students	105	45